

Remarks at the National Technology Initiative Conference in
Chicago, Illinois
September 25, 1992

Thank you all very much. Thank you. It's a pleasure and honor to be back on this campus. Thank you, Barbara Franklin, our able Secretary of Commerce. Let me say how pleased I am to also have with me two of the other top officials in our Government: the Secretary of Energy, Jim Watkins, who has served his country in several roles with great distinction, and of course, one that's I'm sure well-known to many of the scientists here, Dr. Allan Bromley, who is the Science Adviser to the President, has just worked in so many ways to further the aims of science in this country.

I want to thank Dr. Laumann for his hospitality, the provost, and say that I am glad to be back on the campus. I'm at risk here because I'll leave out others who have served their country, but I just had the pleasure of shaking hands once again with the former Attorney General, your own Ed Levi, who has served not only in Government at the highest levels but also has done such a remarkable job in academia. George Shultz I single out as a former professor here and a former great Secretary of State. And of course, his Deputy there, a business leader now coming to this faculty, Ken Dam, who I believe will be at the law school, but another outstanding American. So you can see that Chicago is still getting a good combination of public service and then outstanding academic credentials. And I feel honored to be here. I want to thank the Governor, who is doing a great job for this State, for being at my side, and also salute Susan Solomon, who was named Scientist of the Year by R&D Magazine.

So here we go. I would remind you that Illinois' most famous son and the first Illinois Republican, Abraham Lincoln, once said that the struggle of today is not altogether for today; it's for a vast future also. And that's why I've come to this great university for this lecture, to the city in the heart of the most confident nation on Earth, to talk to you today. In less than 6 weeks—there's going to be a little politics in this, too—[laughter]—no, but in less than 6

weeks you face a fundamental choice about the future of our great country, about the kind of America we'll seek to build, about the direction that we're going to take.

A few weeks ago out in Detroit, I laid out the direction in which I hope to go. I called it the plan for American renewal. My strategy is integrated, tying economic policy and foreign policy and domestic policy all together because they, in fact, are related.

I put it simply: Our defining challenge in the nineties is to win the economic competition, to win the peace. So my agenda outlines the steps that we can take today to make America more competitive both now and in the future. And one key step is to invest in technology.

Today I want to talk to you about my program for investing in civilian research and development. I want to talk about how we can speed the process through which American businesses and entrepreneurs can turn the fruits of that R&D into successful products and American jobs.

I included investment in civilian R&D in my Agenda for American Renewal for a very specific reason. In the information age, when capital and ideas can move around the world literally in seconds, investments in R&D and in the technologies of tomorrow can improve our productivity. That is the key, the fundamental key to increasing economic growth. And growth means an improved standard of living for the American people.

In the old days, economists would tell you that capital and labor were the two ingredients that you needed to make the economy produce. Today, it's universally accepted that a third ingredient is needed, knowledge. We need the best ideas in the world, and America has always had them. For decades, American scientists have produced the most scientific literature, the most new patents, the most Nobel prizes. We are investing in basic research to keep that lead.

But to win today's economic competition we must have processes that can speed the route from the laboratory to the marketplace. We need investments in applied R&D. We need capital to turn the abstract idea into concrete results. We need a work force with the brainpower and the skills to take these technologies and turn them into the best quality products anywhere on Earth.

If we succeed in creating these building blocks, we will succeed in creating jobs. Just look at Jim Edgar's State, your State, Illinois; 588,000 jobs in this State are tied to high technology. That's over 11 percent of Illinois' work force. My agenda states that we must sharpen the competitive edge of the American business. But it rests on the core belief, a simple core belief, that the source of our success has always been the immense power of entrepreneurial capitalism. And that is a key difference from the vision of—the differences between me and Governor Clinton in this election.

You see, my opponent has also been talking about investing in civilian R&D during this election. But my opponent's rhetoric stops, falls short in four key respects. And I'd just like to ask you to compare.

First, he puts his faith in the ability of the Government to pick the right investments, industrial policy we call it, to control the resources, to determine which particular product and process will be favored by the bureaucrats in Washington. I want to empower the businessman or the businesswoman. I want them to develop a range of products, picked not by industrial planning, not by the planner but by the power of the marketplace.

Second, while Governor Clinton may be claiming he's going to make the right play, Congress is intercepting the ball and running it in just exactly the opposite direction. In each of the past 4 years, my R&D budget has been cut by Bill Clinton's allies in the other party on the Hill, the pork-happy partisans I call them in my more congenial times, up there in Congress. *[Laughter]*

In fact, right now—look, this year, the Democratic leaders in the Congress, with whom the Clinton campaign is consulting each and every day, have slashed my proposed increase for the National Science

Foundation, headed by your own Walter Massey. They've zeroed out my proposed initiative in magnetically levitated high-speed rail. They've reduced our investment in computers and advanced materials and manufacturing R&D. While the Governor talks high-tech, his allies in Congress walk away from it.

Governor Clinton's own plan, for all the talk about research, would gut the foundation of American science and technology enterprise by cutting university reimbursements for R&D by \$3 billion, almost one-third. Under his plan the ability of great universities like the University of Chicago to conduct world-class research, in my view, that would be compromised.

Third, the promises of the candidate don't match the record of Governor Clinton. The most recent report card on technology indicators, and that was published by the Corporation for Enterprise Development, rated Arkansas near the bottom among States in virtually every category. For technology resources, Arkansas got an "F."

Now, he's not even lining up the fundamentals for a high-tech world. At the end of the 1980's, Arkansas ranked 48th in the percentage of adults with high school diplomas. Three-quarters of Arkansas' high school graduates needed remedial education when they get to college. So it's odd for him to talk about high-tech when the residents of his State have to worry about getting out of high school.

Finally and most importantly, he proposes to finance his many promises with a massive tax increase that will smother the very growth on which our success depends. I had a Freudian slip the other day—and it was; nobody believes it when I say this—Clinton was "Governor Taxes." But he has proposed the largest, really, the largest tax increase in American history, \$150 billion. And that's just for openers. To pay for his other promises, he'll have to tax small businesses, the main source of jobs in our economy and the heroes of high technology. So let's be clear: These high-tax policies will kill high-tech's businesses. Even the Governor is beginning to see that these tax policies are catching

up.

Yesterday he talked about the health care plan. It was the third different plan in 3 months, his third different plan. First he said the plan would not require any new taxes. Then, in his second version, he admitted there would be a buy-in tax for employers. Now he's walking away from that, too. Yesterday, in the third version, he moved toward my plan, even using some of the same terms.

The rhetoric certainly sounds better. It uses words like "competition" and "preserving quality." But when you strip away the double-speak, it is the same old thing. In his plan in any version, employers have to provide the insurance that his national health board says is right, or they pay what Governor Clinton calls a mandatory premium. What he calls a mandatory premium you and I call a tax. It is plain and simple. Worse yet, we all become part of a national health care spending limit set by a Government-appointed board. We all know what that means: long lines and price controls that will only kill competition, will only lead to rationed health care.

So the Governor really is in more places than Elvis on this one. One thing—and I say this having been there—one thing about the Oval Office, you have to take positions. Whether it's on war and peace or whether it's on bills you veto or whatever it is, you can't conceal them, and you don't get to change your mind every time the heat gets turned up.

The direction that I propose at its heart is future-oriented and outward-looking. I do not believe that Americans should fear competition, because I believe when it comes to new ideas, America can compete. And America can win. So I've worked to open markets, to get our work force ready to compete, and both as a Government and as a society, to invest in the future. In short, I believe we should compete, not pull back, not retreat. I believe we can do it without a massive expansion of the Federal Government that reaches into the pocket of every American taxpayer.

Let me talk about the elements of this competition. First, open markets. My opponent said America is in decline. He used the analogy somewhere below Germany but

just above Sri Lanka. Well, that is not the way others look at this country, certainly not the way I look at this country. But the fact is that we are winning new markets for American goods and services right now, even though the world economy has been very difficult.

Just look at our export performance over these past 4 years. We've increased exports by 40 percent. We have gained worldwide market share in manufacturing output. Our exports to Japan have grown 12 times faster than our imports. The average American simply does not understand that. And high-tech exports have led the way. Since 1987, our trade surplus in advanced technology products has grown by more than 80 percent. So I have a message for the pessimists: We can compete, and we can win.

For us to continue to win new markets for America, we need a more open world trading regime. So we've worked to complete this famous North American free trade agreement, referred to as NAFTA, which will create almost 200,000 jobs right here in the United States. We've worked for a successful conclusion of the Uruguay round. Now that one's been hung up, as you know, in the Maastricht agreements, the vote, particularly the vote in France, the very recent vote in France on the Maastricht agreements. We're going to keep pushing for that, however. We've completed individual agreements with Japan, Korea, Mexico, and countries around the world to open markets for technology and protect American intellectual property so that the incentive to generate new ideas and create new products remains.

Now, again, my opponent has waffled on NAFTA. He would risk our ability to expand trade by supporting antitrade legislation on Capitol Hill. The tax on foreign investment, believe me, the tax on foreign investment in the United States will not only lock out high-wage, high-skill jobs here, it will invite retaliation that will undercut the growth in exports which is absolutely key to the growth in our economy.

Let's talk about education and preparing our children to meet the challenges of the 21st century. Governor Clinton has said that we've reduced investment in educa-

tion. And candidly, again, he is wrong. Education this year got the biggest increase in my budget. It is up 41 percent over 1989. We've placed a particular emphasis on math and science education, boosting it by more than two-thirds since 1989 so that this year's budget's going to be able to use Federal assets to help train over 770,000 teachers in these math and science skills that are absolutely essential for teaching our kids.

Let's talk about investing in the future. We've been working to promote the technologies that will make us more competitive in the future, but it's time to set the record straight on this. The Governor said we've reduced investment in civilian R&D. That is simply not true. Here is the record: My budget this year would increase civilian R&D by 44 percent over 1989 levels. Civilian basic research is up 36 percent, and applied civilian R&D is up 49 percent. So when the Governor talks about investing in civilian R&D, the fact is we are already doing it. If I weren't doing it, Allan Bromley, sitting over my shoulder, would kill me, absolutely kill me, because he's brought to the fore the need to keep us on the cutting edge when it comes to science and technology.

Now, let me explain what we're doing. Two years ago we pulled every Federal Agency together to launch a new program to develop the supercomputers of tomorrow, computers 1,000 times more powerful than today's. Our vision is to see industry develop a supercomputer the size of a desktop PC and to do it within 4 years. We also proposed a nationwide communications network, an information backbone that will transmit 1,000 times more information than we can today in one second. This year, we proposed over \$800 million, that's a 23-percent increase, for this high-performance computing and communications initiative.

Last year we launched another cross-cutting technology plan, an investment of over \$1.8 billion in the materials of tomorrow. Now, these new kinds of materials will help us make products that are stronger, lighter, and faster, everything from cars to airplanes to military equipment. And we've launched a \$4 billion program in biotechnology research and proposed to knock down the regulatory barriers that might prevent tech-

nologies in this area from helping us to cure disease, grow more crops, or clean up the environment.

We're using technology to tackle a really unfortunate legacy of the war, the cold war, the environmental problems left from making weapons that defended freedom around the globe. Winning the peace means managing dangerous materials more effectively. Today we're using the scientific expertise of our marvelous Federal labs, whose scientists first devised these bombs, to find new technologies for stopping weapons proliferation and for protecting our children from environmental threats.

I take great pride, great joy as a grandparent that the young people in this country go to bed at night without the same fear of nuclear war that their older brothers or their fathers and mothers did. That is a major advancement, and yet we still have problems in the nuclear age. We cannot turn our back on them. And Jim Watkins, our able Secretary, is contending with these problems daily.

But look, I'm here today because a successful strategy for winning the economic competition requires more than just the investment in R&D, whether it's basic or applied. In a fast-paced world of shorter product cycles and faster communications, the key to victory is moving ideas and technologies from the laboratory bench to the commercial marketplace faster than ever before.

That's what this National Technology Initiative, or NTI, is all about. This is the 11th NTI meeting that we've had, each in a different part of the country, each designed to help speed the transfer of technology from our Federal labs and universities to the private and commercial sector. We're working to make it easier to deal with the Federal Government as a partner. If you attend the workshops and visit the technology fair, you'll get a window on today's opportunities and an early start on tomorrow's successes.

One year ago, I directed the Secretaries of Commerce, now Barbara Franklin, Secretary of Energy Jim Watkins to increase the number of cooperative research and development agreements signed between our Federal facilities and the private partners.

These CRADA's, as they are called, help speed the transfer of the most promising technologies from the Government to the private sector so they can be developed into commercial products and services.

In the one year since that directive was issued, we've doubled the numbers of these agreements. There are now more than 1,400 operating and in place, computers, ceramics, environmental cleanup. We are achieving an unprecedented level of success in taking the best ideas from our labs and turning them into American products. In these days, it's fundamental: American jobs.

Today we are signing several new breakthrough agreements. One involves two Federal labs and three private industry partners working to determine the right mix for burning pelletized trash along with coal to generate electricity. The results will be cleaner air, less trash in our landfills, and more jobs in Illinois. Second, we'll bring the Oak Ridge National Lab together with IBM to extend America's leadership in high-performance computing. The third one involves a partnership between General Motors and the National Institute of Standards and Technology, NIST, to develop new software to solve problems in automated manufacturing equipment.

These agreements provide rules of the road, protection of patents and intellectual property and other understandings so that technology transfer is not just a concept, but a job-producing reality.

Our program reflects a fundamental belief about the path to successful technology development. Our efforts to transfer technology from the labs to invest in the most promising technologies of tomorrow have recognized the fact that the private sector must be the one to commercialize these technologies.

To help in that task, to spread information about best practices and new processes, my administration has also established seven regional manufacturing tech centers around the country. These centers will introduce new equipment and improve manufacturing processes for small and medium-sized firms. You know, since 1989, more than 6,000 companies have used the services provided by these centers. And we plan to start up four more of them next year.

Now, again in the politics, my opponent proposes to create hundreds of centers. He doesn't say how long it will take to build them, but I can tell you this: We don't need a massive bureaucracy. We want to share best practices, not necessarily every practice that a Government planner wants to push.

I think the fundamental point is this: Rather than waiting for the bureaucrats and planners to decide what's best, I believe that we should foster the kind of partnerships that will allow the private sector to help identify and commercialize the most promising technologies, those in which we are pursuing leadership today.

In next year's budget, we will launch a new initiative to increase our investment in R&D into new technologies to advance the manufacturing process. You know, today's factories face a different set of challenges from those of a generation ago. In the face of fast-changing requirements, more flexibility is needed. We want to advance the development of systems in software, robotics, artificial intelligence, to make this flexibility possible for all kinds of companies. The Government will help with technological leaps so that American firms can leap ahead in the marketplace.

One of the most quintessentially American figures of our time, a scientist, a research and development scientist, John Wayne, you remember him, once said that, "Tomorrow is the most important thing in life."

When the shouting is finished and all this campaign winds down to its end, it will come down to a very personal and serious decision for every American: What kind of tomorrow do you want? Do you want a tomorrow in which we look forward and take on the competition or one where we turn inward to protectionism and pull back? Do you want a tomorrow in which we invest in the technologies that can make us more competitive or in which we allow the patrons of the past to spend our future away? Do you want a tomorrow in which work and innovation are rewarded or in which we turn back down the path of higher taxes and more regulation?

When Americans step into that booth this year, they will face a fundamental choice about the kind of future that they want. I have come today out here to Chicago to offer my ideas for a future full of promise. I am optimistic about the future of this country. Let there be no mistake about it: Regardless of what we have been through, I am absolutely convinced that the young people that many of you in this room teach have an exceptionally bright future ahead, a future in which America works, America competes. And America wins.

So I thank you for being a part of this future in your own way—put the politics

aside for a moment. I've been told by Allan Bromley and others of the fantastic R&D capability, scientific know-how right here in this room today. And I ask you to visualize the same kind of future I've outlined to you.

Many, many thanks for your attention. And may God bless our great country. Thank you very, very much.

Note: The President spoke at 2:26 p.m. in Mandel Hall at the University of Chicago. In his remarks, he referred to Kenneth W. Dam, Max Pam professor in American and foreign law, University of Chicago.

Remarks to Working Families for Bush-Quayle in Chicago September 25, 1992

Let me put it this way, I'm glad to be running against Governor Clinton instead of Randy here. [Laughter] He is tough. I mean that was a wonderful introduction and wonderful comments. And thank you very, very much. Thank all of you here and out there for being here.

Let me, of course, salute the Governor, Jim Edgar. You've got a first-class Governor in this State. And I'm very proud to have his support. May I greet Sam Panyotovich, the State representative. And to all of you, thank you for being with us.

When I first heard I was heading for the Windy City, I was afraid I was going up to Capitol Hill, as Randy was talking about them. Instead, here I am, glad to be back in this city of big shoulders and very, very proud to have the endorsement of these hard-working men and women.

Two men ask for your support this year and ask America to decide where we're going. Two different philosophies, two very different agendas, two candidates shaped by where each of us has been. My opponent started in politics with George McGovern. He spent almost his whole career on a government payroll. Kind of like a contestant on "Jeopardy": Alex Trebek would say, "The answer to everything," and Bill Clinton would answer, "What's 'More Govern-

ment'?"

My background's very different. I started a business. As Randy said, I met a payroll of working men and women. I learned that higher taxes and spending do not create jobs, they destroy jobs. And every day in the economy, every day, is high noon. I spent half of my adult life in public service and the other half in private sector. And I think that's a good mix, a good combination.

Sending Uncle Sam into the world to fight, burdened by higher taxes, is like sending Norm Schwarzkopf into Kuwait to fight with one hand tied behind his back. I didn't do the latter, and I do not want to see this country burdened further by taxes.

That's why my comprehensive approach to win the new global economy is built on lower taxes, lower spending, and less regulation. It's not a tax break for the rich, it's a jobs break for America. This Agenda for American Renewal that Randy very generously mentioned can create the world's first \$10 trillion economy by the dawn of the next century, not by turning inward but by reaching out to free markets and free trade and freedom itself, the freedom to save, to invest, to work, to keep more of what you earn.

This won't surprise you, but Governor